

REMARKS

Claims 33-44 are pending. Claim 33 has been amended. Support for the amendments may be found in paragraphs [0047] and [0048] and the FIGS. including electrodes and supporting description in published application US 2002/0136018. No new matter has been added. Applicant requests reconsideration of the pending claims.

Antal et al. in view of Frungel

Claims 33, 35, and 37-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antal et al. (U.S. Patent No. 4,861,302 hereinafter "Antal") in view of Frungel (U.S. Patent No. 3,529,208).

Antal discloses the following:

The aim of the present invention is to provide a process for flushing and filling a low pressure gas discharge light source . . . which can assure the gas purity which is so important for the lamp quality (Antal, col.2, lines 15-23).

The invention is based on the discovery that the gas purity achievable at the end of the pumping cycle and the stability of the charging pressure may be considerably influenced by the pressure stages adjusted or set during flushing and pumping out of the gas. (Antal, col.2, lines 24-29).

By virtue of the fact that the supply of the gas takes place simultaneously with the pumping out a more intensive through-flushing is achieved because the continuous gas stream flowing [] through one of the exhaust tubes drives contaminations before it . . . and the contaminations are driven relatively rapidly through the other exhaust tube of the discharge vessel out of the interior of the latter. In this way not only is the speed of removal of contaminations increased but so also is the efficiency of the latter because the flow conditions arising within the discharge vessel prevent the contaminations from remaining in the discharge tube and in the corner regions bounded by the closure elements. (Antal, col.2, lines 52-65).

Thus, Antal only discloses that a gas is pumped out of the discharge vessel through a flushing process to remove contaminants and improve gas purity. Antal's intended function is to rapidly and efficiently remove contaminations from the discharge vessel. (Antal, col.2, lines 52-65). Operating the lamp with intermixing of gases during the flushing step would destroy Antal's intended function of rapidly and efficiently removing contaminations for gas purity of the lamp. Applicant could not find any disclosure or suggestion in Antal to power the electrodes during the flowing/flushing of the gas(es) in order to modulate the light source.

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In contrast, Applicant discloses that in one embodiment of the present invention, the “lamp may be operated while gases within the tube are exchanged” (US 2002/0136018, paragraph [0047]). Applicant further discloses that “the characteristics of the light source can be modulated when the light source is in use” (US 2002/0136018, paragraph [0010]) and that if “a user desires to modulate the amount of photonic energy emitted, a user would change the combination of gases to achieve the desired level of photonic energy emitted by the light source” (US 2002/0136018, paragraph [0047]).

Applicant has reviewed the cited references and could find no teaching or suggestion therein, individually or in combination, which anticipates or renders obvious amended Claim 33. The cited references teach completely “flushing” and “removing” (Antal, col.2, lines 52-65) or “draining” (Frunzel, col.2, lines 68-70) or “evacuating” (Frunzel, col.2, lines 65-66) (Tsunekawa, col.1, lines 42-44) contaminant gases.

In contrast, amended Claim 33 recites “opening the inlet and outlet valves to provide for a simultaneous modification of gases between said first electrode and said second electrode” and “flowing a portion of a first gas from between said first and second electrodes out of the light source through the outlet valve, and simultaneously flowing a second gas through the inlet valve into between said first and second electrodes, said first gas being different from said second gas” and “providing power to the first and second electrodes during the flowing of the first and second gases to modulate the light source”. Therefore, because the cited references, individually or in combination, do not disclose or suggest all the limitations of Claim 33, Claim 33 is patentable over the cited references.

Claims 35 and 37-44 depend from Claim 33 and include additional limitations that distinguish them over the cited references. Therefore, Claims 35 and 37-44 are allowable over the cited references, in particular Antal in view of Frunzel, for at least the same reasons provided above with respect to Claim 33.

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Antal et al. in view of Frungel and further in view of Tsunekawa et al.

Claims 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antal in view of Frungel and further in view of Tsunekawa et al. (U.S. Patent No. 4,303,290).

Tsunekawa is cited for teaching the use of inert gases for "the purpose of evacuating a light source as quickly and easily as possible." (Office Action, page 8). Tsunekawa does not remedy the deficiencies of Antal and Frungel noted above.

Claims 34 and 36 depend from Claim 33 and include additional limitations that distinguish them over Antal in view of Frungel and further in view of Tsunekawa. Therefore, Claims 34 and 36 are allowable for at least the same reasons provided above with respect to Claim 33.

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CONCLUSION

For the above reasons, pending Claims 33-44 are now in condition for allowance and allowance of the application is hereby solicited. If the Examiner has any questions or concerns, the Examiner is hereby requested to telephone Applicant's Attorney at (949) 752-7040.

Certification of Facsimile Transmission

I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

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Respectfully submitted,

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